

# Evaluation of Eco Schools Scotland

Anne Pirrie Dely Elliot Fraser McConnell J Eric Wilkinson



ISBN 1 86003 095 5
Copyright © 2006 The SCRE Centre, University of Glasgow
First published October 2006
The views expressed are those of the authors and are not necessarily those of the SCRE Centre, University of Glasgow, or the funders.

SCRE Research Report No 124

# Contents

Ack	knowle	dgements	iv
Exe	cutive	summary	V
1	Intr	oduction and background	1
	1.1	Introduction	1
		About the evaluation	3
		Objectives	4
	1.4	About this report	5
2	Get	ting started	6
	2.1	Changing roles and responsibilities	6
	2.2		7
		Why Eco Schools?	10
	2.4	Questions for discussion and development	11
3	Pur	poses and impact	12
	3.1		12
	3.2	1 1	12
	3.3	Perspectives on priorities	14
	3.4	Questions for discussion and development	17
4	Edu	cation for citizenship	18
	4.1	Developing responsible participation	18
	4.2	A Curriculum for Excellence	19
	4.3	Pupils' views	21
	4.4	Systemic facilitators and inhibitors	22
	4.5	Questions for discussion and development	23
5	Ope	erations and activities	25
	5.1	Introduction	25
	5.2	Operations and activities	25
	5.3	Resources	25
	5.4	Support	26
	5.5	Key questions for discussion and development	27
6	Con	nclusions and recommendations	28
	6.1	Conclusions	28
	6.2	Recommendations	29
7	Ref	erences	32
A TO	DEMIN	rope.	22 44
AP			33–44
		pendix 1: Structure of the Eco Schools Programme	
	Ap	pendix 2: Methodology  Table 1: Sampling frame by location and type of registered school	
		Table 2: Questionnaire responses by authority and type of registere	d school
		Schools Questionnaire	
		Pupils' Questionnaire	
		Table 3: Overview of case studies	
	An	nendix 3: Overview of the main findings from the questionnaire survey	

# Acknowledgements

This report could not have been written without the help and support of a great many people. We are greatly indebted to the pupils, teachers, headteachers, janitors, school administrators and others who gave of their valuable time in each of the schools we visited; and those who completed questionnaires. We should also like to thank the many parents who took the time to come into school to talk to us. Thanks also to Kate Campbell and Kirsten Leask and the rest of the Eco Schools Management Team at Keep Scotland Beautiful. As ever, we are greatly indebted to our colleagues Joan Ballantine, Jon Lewin and Lawrence Wareing.

Anne Pirrie Dely Elliot Fraser McConnell J Eric Wilkinson

May 2006

# **Executive summary**

## Introduction

In October 2005, Keep Scotland Beautiful commissioned the SCRE Centre at the University of Glasgow to undertake an evaluation of the Eco Schools Programme in Scotland.

Eco Schools is a programme for environmental management, certification and sustainable development education. It is an international programme that was developed in 1994 in response to the United Nations Conference on Environment and Development (Earth Summit) held in Rio de Janeiro in 1992. The Programme was introduced in Scotland and the rest of the UK in 1995.

The main message to emerge from the Earth Summit was that 'nothing less than a transformation of attitudes and behaviour' was necessary 'to halt the destruction of irreplaceable natural resources and the pollution of the planet'. The development of the Programme in Scotland was lent further impetus by the fact that participation in this scheme was adopted by the Scottish Executive Education Department (SEED) as a performance measure within the framework for school improvement that relates to National Priority 4.2C Values and Citizenship. There are now over 2,000 schools registered in Scotland, the majority (83 per cent) of which are primary schools.

#### About the evaluation

The evaluation took place over a seven-month period (from November 2005 to May 2006). The main aim was to evaluate the perceived effectiveness of the Eco Schools Programme in developing pupils' awareness and in changing their behaviour in respect of the environment. The research comprised two main strands.

- Strand 1: a postal survey of all registered schools (655) in eight local authorities in Scotland Glasgow, South Lanarkshire, Dundee, Shetland, Highland, Dumfries and Galloway, North Lanarkshire and the Western Isles. Preliminary interviews with key stakeholders (n = 8) were conducted to inform the development of the questionnaire. The response rate was 48 per cent. Members of the Eco Committee in secondary schools in these authorities were invited to complete a short questionnaire Thirty completed questionnaires were received, representing a response rate of 34 per cent.
- Strand 2: case-study research, comprising individual and group interviews with up to six key informants (teaching and non-teaching staff, pupils and parents) in six locations (4 primary schools and 3 secondary schools) in two focus authorities South Lanarkshire and Dundee.
- Part of the remit was to review the implications of the findings for the future strategic development of the Programme.

The main findings to emerge from the study are summarised below.

# **Getting started**

- Nursery and primary schools had a disproportionately high number of awards
   87 per cent of all awards won, as opposed to a mere 5 per cent for secondary schools.
- Opinion leaders within schools played an important role in initiating and sustaining involvement in the Eco Schools Programme.
- Leading by example was considered the most effective way of ensuring that a sufficient number of people in the school community were actively involved in the Programme.

# Getting everyone involved

- The key to successful participation appeared to lie in making the achievement
  of the objectives of the Eco Schools Programme an integral part of the
  operations of the school.
- Sixty-one per cent of respondent to the questionnaire survey accorded the Eco Schools Programme 'very high priority' or 'high priority' in their school development plan.
- Ninety four per cent of the schools that responded to the survey stated that they were involved in Health Promoting Schools; and 80 per cent in Active Schools.
- The existence of a number of parallel initiatives such as Health Promoting Schools and Active Schools was generally perceived as a positive feature of the cross-curricular landscape in Scottish schools, particularly at primary level.
- The consensus to emerge was that Eco Schools was an effective umbrella for working on a range of cross-curricular issues such as health promotion, enterprise and sustainable transport.

# The challenges for secondary schools

- The Programme appeared to be accorded lower priority in school development plans in the secondary schools surveyed.
- The Programme did not appear to have sufficient appeal for secondary school pupils, and the majority of pupils appeared less motivated than their counterparts in primary schools.
- However, the secondary pupils who responded to the survey considered that their peers were now more likely to recycle paper, glass etc, and less likely to drop litter.
- The evidence from the secondary pupils' survey suggests that at secondary level there is scope to tackle a wider range of issues than those covered specifically by the eight core environmental topics of the Eco Schools Programme.

# **Developing responsible citizens**

- Overall, the Programme was considered a good way to develop education for citizenship in school.
- The evidence suggests that there is a clear link between devising more effective approaches to resource management and developing education for citizenship.
- The status of the Programme as a recognised award scheme was considered the least important dimension, although gaining an award was perceived to enhance the status of the school in the local community.
- There was a strong consensus that 'involvement in the Programme has had a positive impact on pupils' behaviour in respect of the environment'.
- The Programme was perceived to have had the most impact on the physical environment of the school, and to have made a positive contribution to school ethos.
- The responses to the main questionnaire survey indicate that involvement in the Programme enabled staff to 'develop a shared vision for the whole school', and thus contributed to the development of a value base for responsible citizenship.

# **Perspectives on priorities**

- The core environmental topics that were considered most relevant by both teachers and pupils were the development of school grounds; and health and well-being.
- The development of the school grounds was considered to be the one from which pupils were perceived to derive the greatest benefit. This applied particularly to younger pupils, who were more likely to engage in active play in the school grounds.
- The school grounds or garden was an area in which progress was clearly visible, not only to all those in school, but also to members of the wider community.
- The evidence from two of the case studies suggests that there are intangible benefits related to personal and social development that derived from activities such as working in the garden.
- The findings from the main questionnaire survey indicate a strong consensus in support of the importance of fostering critical thinking in respect of sustainable development and environmental issues.
- The area that appears to present the greatest challenge to schools is 'involving the wider community' in activities organised under the auspices of the Eco Schools Programme.

## Recommendations

The following recommendations are intended to further discussion and debate on the future strategic direction of the Eco Schools Programme in Scotland.

#### Changing the emphasis from awards to self-directed learning

The evidence suggests that schools set a relatively low priority on gaining an award, despite the prominence of this dimension on the Eco Schools website.

• More space could be devoted to rationale rather than structure, and to process rather than procedures.

#### Engaging the secondary school community

- The Eco Schools Management Team should endeavour to increase the involvement of secondary schools.
- One way of achieving this would be to display more prominently on the main website pages (ie not just in Bulletin PDFs) material associated with activity and achievements in the secondary sector.
- Consideration might be given to setting up twinning arrangements between primary schools and secondary schools. This might facilitate further initiatives in the primary school; and provide personal development and mentoring opportunities with a sustainable development focus for a range of secondary pupils. Such arrangements should also be prominently displayed on the main pages of the Eco Schools website.
- The website might be further developed to include a section specifically for secondary schools. This could be developed in consultation with pupils from participating schools.

#### Defining the criteria for awards more tightly

The criteria for awards are currently defined fairly loosely. This allows for greater flexibility for both schools and assessors. However, it may contribute to some schools delaying applications for awards, or for disparities between schools that have achieved the same level of award.

• The Eco Schools Management Team should consider defining more closely the award criteria.

#### Communicating achievements

The evidence suggests that communication with parents and the wider community was largely restricted to short newsletter items, and to inviting parents to specific awareness-raising events ('eco days', garden openings, etc). There are clearly challenges associated with involving parents during the school day, when many are working.

• The Eco Schools Management Team should consider strengthening the requirement for effective communication into the assessment criteria.

- Participating schools should consider involving staff with a home-school link remit more actively in this dimension of the Programme.
- There should be a gradual shift in emphasis from frequency of meetings involving members of the community towards increasing the quality of community involvement.

## Sharing ideas

There are two dimensions to this issue. The first is to harness the experience of those schools that have attained Green Flag status. The second is to make practical trouble-shooting advice more readily available, and to extend the sharing of good ideas beyond the pages of the monthly Eco Schools Bulletin.

- Consideration should be given to reviewing the utility of permanent Green Flag status and harnessing the experience of schools that have gained three Green Flags to the benefit of other schools. This could be achieved by involving headteachers in a limited number of assessment visits and in a series of networking conferences, during which they will be able to offer practical support and encouragement to other schools in their area.
- The Eco Schools Management Team should consider flagging up new ideas more clearly on the website pages, not just in Bulletin PDFs.
- The Team should consider establishing easily identifiable databases or a Frequently Asked Questions (FAQ) section for information that would benefit regions and larger numbers of schools, and be proactive in gathering local experience and advice, eg in relation to funding opportunities; external groups/events available for booking in local schools; and frequently encountered issues such as paper cup recycling waste paper management.

#### Streamlining assessment procedures

Some respondents considered that there was 'too much paper work' required to gain an award. This has implications not only for schools, but also for the Eco Schools Management Team, which faces an increasing workload as registered proceed through the levels of award. Delays in assessment may result in schools losing momentum.

• The Eco Schools Management Team should make it clear that it is possible to include pupils' own reports and writing as valid elements of the written evidence submitted to assessors.

#### Getting local authorities on board

There appears to be considerable diversity of practice across local authorities in respect of the level of support offered to schools that have launched, or are attempting to launch recycling schemes for paper, plastic and glass.

 There is an urgent need for local authorities to increase levels of support to schools in respect of waste management. This will enable schools to fulfil their role as opinion leaders, and to influence the attitudes and practices of coming generations towards the environment.

# 1: Introduction and background

#### 1.1 Introduction

Only people with a sense of responsibility for the world and to the world are truly responsible to and for themselves.

Vaclav Havel, (1998) The Art of the Impossible

In October 2005, Keep Scotland Beautiful commissioned the SCRE Centre and the Department of Educational Studies at the University of Glasgow to undertake an evaluation of the Eco Schools Programme in Scotland. Eco Schools is a programme for environmental management, certification and sustainable development education. (See Appendix 1 for a brief overview of the structure of the Programme.) The development of the Eco Schools Programme in Scotland was lent further impetus by the fact that participation in this scheme was adopted by the Scottish Executive Education Department (SEED) as a performance measure within the framework for school improvement that relates to National Priority 4.2C Values and Citizenship. There are now over 2,000 schools<sup>1</sup> registered in Scotland, the majority (83 per cent) of which are primary schools.

The Eco Schools Programme was developed in 1994 by the Foundation for Environmental Education (FEE) as a direct response to the United Nations (UN) Conference on Environment and Development (Earth Summit) held in Rio de Janeiro in 1992. The Programme was introduced in Scotland and the rest of the UK in 1995.

#### 1.1.1 Rationale

The main message to emerge from the Earth Summit was that 'nothing less than a transformation of attitudes and behaviour' was necessary 'to halt the destruction of irreplaceable natural resources and the pollution of the planet'.<sup>2</sup> Agenda 21, a comprehensive programme for global action in all areas of sustainable development, was one of three major agreements adopted at the Earth Summit. Local authorities were required to draw up their own Local Agenda 21 (LA21) strategies following consultation with their citizens on local priorities. In Scotland, LA21 strategies have been largely superseded by what are variously referred to as sustainability policies, environmental strategy policies and sustainable development policies. This change is largely in nomenclature only, and reflects the distance travelled since the Earth Summit. The Duty of Best Value in the Local Government in Scotland Act 2003 now requires that 'the local authority shall discharge its duties under this chapter in a way which contributes to the achievement of sustainable development'. This is an indication that sustainable development<sup>3</sup> is now – at least in theory – being mainstreamed into local government decision-making.

The term 'schools' is used throughout this report, although this may include free-standing nursery provision.

<sup>&</sup>lt;sup>2</sup> See <http://www.un.org/geninfo/bp/enviro.html> for a brief overview of the background to the Earth Summit and the related UN follow-up activities.

The definition of sustainable development used in the Best Value statutory guidance combines two definitions from the Scottish Executive, and reads as follows: '...development which secures a balance of social, economic and environmental well-being in the impact of activities and decisions; and which seeks to meet the needs of the present without compromising

However, the origins of the Eco Schools Programme reside in Agenda 21, and it is to this that we now return. Chapter 25 of Agenda 21 makes explicit reference to involving children and youth in the protection of the environment. The 'basis for action' for Programme Area A ('advancing the role of youth and actively involving them in the protection of the environment and the promotion of economic and social development') is 'that it is imperative that youth ... participate actively in all relevant levels of decision-making processes'. It is also stated that 'in addition to their intellectual contribution and their ability to mobilize support, [children and young people] bring unique perspectives that need to be taken into account'. The Programme was developed by FEE as a means of 'deliver[ing] Agenda 21 commitments and involving people of all ages and nationalities through formal school education, training of staff and general awareness raising'.

## 1.1.2 Participative, cross-curricular approaches

The notion of the active involvement and distinctive contribution of children and young people in the protection of the environment enshrined in Agenda 21 provides the nexus with the vision of education for citizenship set out in Education for Citizenship in Scotland - A Paper for Discussion and Development (Learning and Teaching Scotland, 2002). The position of the Advisory Council of Learning and Teaching Scotland is that one of the purposes of education is to enable young people 'to develop capability for thoughtful and responsible participation in political, economic, social and cultural life' (Learning and Teaching Scotland, 2002, p 3). There is thus a considerable overlap with the economic and social development domains identified in Agenda 21. There is also an explicit reference in the Discussion Paper to providing young people with learning experiences that will enable them 'to demonstrate understanding of' (and, by implication, to become actively involved in) 'opportunities ... to bring about social and environmental change', and to develop their understanding of 'the values on which such endeavours are based' (p 12). The Eco Schools Programme is one of a number of mechanisms through which this can be achieved. We shall explore the degree of interaction with some other related Scotland-based initiatives later in this report.

Under the rubric 'responsible citizens', A Curriculum for Excellence (SEED, 2004a) sets out the aspiration that all young people should be enabled to 'evaluate environmental, scientific and technological issues', and 'make informed choices and decisions' (p 12). There is thus an implicit rather than explicit commitment to changing behaviour in respect of the environment. There is, however, an explicit pledge to achieving 'more space for sport, music, dance, drama, art, learning about health, sustainable development and enterprise ...' (p 4) With specific reference to the proposed overhaul of the curriculum in S1 to S3, the Ministerial Response to A Curriculum for Excellence (SEED, 2004b)

the ability of future generations to meet their own needs." <a href="http://www.scotland.gov.uk/Publications/2004/09/19900/42679#2">http://www.scotland.gov.uk/Publications/2004/09/19900/42679#2</a> Accessed 30 May 2006.

Agenda 21, see Chapter 25 Children and youth in sustainable development, paras. 25.1–25.17.

<sup>&</sup>lt;a href="http://www.un.org/esa/sustdev/documents/agenda21/english/Agenda21.pdf">http://www.un.org/esa/sustdev/documents/agenda21/english/Agenda21.pdf</a> Accessed 30 May 2006.

contains a commitment to cross-curricular objectives, by exhorting education providers to ensure that

... opportunities for in-depth activities which extend across and beyond subjects (for example, challenging projects, sustainable development, health promotion and sports, arts, cultural, community and work-related activities) like at the heart of the curriculum, not as add-ons. (p 5)

This area is in greater depth in Chapters 4 and 6 of this Final Report.

#### 1.2 About the evaluation

The evaluation took place over a seven-month period (from November 2005 to May 2006). Its main aim was to evaluate the perceived effectiveness of the Eco Schools Programme in developing pupils' awareness and in changing their behaviour in respect of the environment. For as Morag Watson, Education Policy Officer at WWF Scotland pointed out at a seminar on citizenship and sustainable development education (SDE)<sup>6</sup>, '...it might be increasing our knowledge and understanding, but if it isn't making us behave differently, it isn't SDE'. The extent to which the Programme was perceived to contribute to the further development of education for citizenship, and to contribute to the aspirations set out in *A Curriculum for Excellence* (SEED, 2004a) were secondary foci of interest.

The research comprised two main strands, which are detailed below. (Readers with a specific interest in the research methodology should refer to Appendix 2, which includes copies of the main research instruments.)

#### 1.2.1 Postal survey

Strand 1 comprised a postal survey of all registered schools (655)<sup>7</sup> in eight local authorities in Scotland – Glasgow, South Lanarkshire, Dundee, Shetland, Highland, Dumfries and Galloway, North Lanarkshire and the Western Isles (see Appendix 2). The authorities were selected from the Eco Schools Programme database on the basis of the following criteria:

- Geographical location representation of urban and rural schools
- High/low percentages of schools registered in the Eco Schools Programme

Preliminary interviews with key stakeholders (n=8) were conducted to inform the development of the questionnaire. The respondents were drawn from the following: SEED, Scottish Executive Environmental and Rural Affairs Department (SEERAD), HM Inspectorate of Education, Learning and Teaching Scotland (HMIE), Convention of Scottish Local Authorities (COSLA) and Bright New Scotland.

The survey was designed to collect data in relation to reasons for involvement and links with other cognate initiatives (such as Determined to Succeed, Hungry for Success, Active Schools, Health Promoting Schools and Safer Routes to

<sup>&</sup>lt;sup>6</sup> This event took place in the Global Citizenship Unit, Faculty of Education, University of Glasgow on 22 March 2006.

<sup>&</sup>lt;sup>7</sup> This figure was subsequently revised downwards to 633 (see Appendix 2).

School); perceptions of purposes and impact; and operations and activities. Respondents were also asked to comment on future priorities for the development of the Programme. Particular attention was paid to issues highlighted in the Research Specification, namely:

- Pupils' motivation and behaviour
- Collaborative planning
- · Team working
- School ethos and environment.

The overall response rate for the postal survey was 48 per cent. (See Appendix 2, Tables 1 and 2 for more details.)

In the case of secondary schools, members of the Eco Committee were invited to complete a short questionnaire (see Appendix 2). Thirty completed questionnaires were received, representing a response rate for this element of the survey of 34 per cent. In just under half of the schools that submitted responses, the members of the Eco Committee reported that they had been involved in the Programme while at primary school.

#### 1.2.2 Case studies

Strand 2 of the research design comprised individual and group interviews with up to six key informants (teaching and non-teaching staff) in six locations (3 primary schools and 3 secondary schools) in two focus authorities – South Lanarkshire and Dundee. Focus groups with parents and pupils were also conducted in each site. The two focus authorities were selected on the basis of levels of registration reported to Keep Scotland Beautiful (see Appendix 2, Table 3 for an overview of the case studies.) After consultation with the Eco Schools Management Team, it was agreed to visit a seventh location, a primary school that had achieved its third Green Flag Award. This was considered necessary in order to include in the evaluation schools with a range of experience of the Programme, and with differential success rates. This report includes a number of examples drawn from the case studies. All the schools have been given pseudonyms in order to maintain confidentiality. The examples from the case studies are designed to illustrate in greater depth and to deepen understanding of issues arising from the questionnaire survey.

# 1.3 Objectives

The specific objectives of the research are detailed below:

- To review the key documents relating to the Eco Schools Programme, particularly the Handbook (Keep Scotland Beautiful, 2003).
- To conduct interviews with key personnel and stakeholders in the SEED, SEERAD, HMIE, Learning and Teaching Scotland, and COSLA; a sample of respondents from local authority education departments; and a sample of volunteer assessors.

- To negotiate access to the Eco Schools Programme database in order to determine local authority 'outliers' in terms of the percentage of primary and secondary schools currently registered for the Programme in these authorities.<sup>8</sup>
- To conduct a postal survey of all the schools and educational institutions registered for the Programme (655) in eight local authorities across Scotland. In addition, members of the Eco Committee in all the secondary schools concerned were invited to complete a short pro-forma.
- To gather qualitative data by means of face-to-face individual and group interviews, and telephone interviews where appropriate, with a range of staff (teaching and non-teaching) and students in the six case studies. These were located in two local authorities at different ends of the 'high-involvement'/low-involvement' continuum.
- To explore parental perspectives in the six case studies by means of focus groups (between four and six groups in total).
- To review the implications of the findings for the future strategic development of the Programme.

# 1.4 About this report

This report is designed to provide a clear overview of the main findings, which are reported thematically. In order to make the report as concise and readable as possible, technical details are confined to the appendices. Appendix 3 comprises a synoptic overview of the main findings from the questionnaire surveys.

5

For the purpose of selecting the eight authorities for the questionnaire survey, the key variable was the proportion of primary and secondary schools registered. Special schools, free-standing nurseries and primary/secondary composites were included in the sample. The differential response rates for each category are reported in Appendix 2.

# 2: Getting started

We were already doing eco, so we thought we might as well do the awards. We must carry on now, because we don't want to lose the flag.

HT, Rowan PS

# 2.1 Changing roles and responsibilities

The findings from the questionnaire survey underline the rapid expansion of the Eco Schools Programme since 2002, when it was adopted as a performance measure relating to National Priority 4.2C Values and Citizenship. This confirms the trend that was already evident from the Eco Schools Database.

However, a substantial proportion (33%) of respondents (n=101) indicated either that they did not know, or were unsure of, the exact date and month that their school had registered for the Programme. This casts some doubt on the reliability of the survey evidence in respect of the number of awards gained across the eight authorities. The salient findings in respect of awards are as follows:

- North Lanarkshire had the highest number of awards 37 per cent of the total reported across the eight authorities surveyed; and
- Nursery and primary schools had a disproportionately high number of awards – 87 per cent of all awards won, as opposed to a mere 5 per cent for secondary schools.

The relatively high levels of uncertainty in respect of registration details can partly be explained by the fact that 21 per cent of those who responded (n=64) to a particular item (Q 11) indicated that they had taken over responsibility for the programme when the previous co-ordinator left or took up other responsibilities. This underlines the strategic importance of the 57 per cent of respondents (n=173) (frequently a committed member of the senior management team) who reported that they had instigated their school's involvement in the Programme, and who might be described as 'product champions'. Only 17 per cent of respondents (n=52) indicated that they had 'been involved since the beginning'.

Ninety-six schools reported that they had not yet received an award. The brief explanations provided by some schools as to why this was the case cast some light on a range of post-registration teething troubles: for example, delay in convening the Eco Committee and/or implementing the action plan; and the necessity of ensuring that a critical mass of 'key players' (teaching and non-teaching staff and pupils) was involved. In many cases, there were a number of reasons for the delayed start. The following brief quotations provide some illustrations.

We haven't got an award yet because of staff changes and temporary contracts. If I get a more secure post next year, I will begin bronze level.

Teacher, primary school, South Lanarkshire

We haven't got anywhere yet because of time constraints. And now the school is closing, so we have other priorities.

PT, primary school, Glasgow

There have been changes in the staff, and no Eco Committee was ever set up.

DHT, secondary school, South Lanarkshire

# 2.2 Getting everyone involved

The consensus from the questionnaire responses, from the case studies, and from the interviews with key stakeholders conducted at the beginning of the evaluation was that leading by example was the most effective way of ensuring that a sufficient number of people in the school community were actively involved in the Programme. One of the stakeholders described successful Eco Schools as having 'a real buzz and energy about them ... a very positive ethos, a sense of attention to detail, and care.'

The notion of 'critical mass' is key here, as are effective and varied channels of communication in order to ensure that everyone – even those with narrowly circumscribed roles to play, for example a janitor or school caretaker with a specific recycling remit – knows what is going on. The caretaker in Beech PS regarded the work he did for the Eco initiatives as 'part and parcel of my daily routine', and described himself as a 'background member' of the Eco Committee. Nevertheless, he felt able to make suggestions, and played a key role in achieving continuity of initiatives. However, the shift pattern of working, and commitments on more than one school campus meant that he was not always present. How much recycling was done in his absence depended 'entirely on how the other janitor feels, how much he wants to do.' This situation broadly corresponded to the one described by the caretaker in another case study, Oak HS.

#### 2.2.1 Making Eco Schools a way of life

The evidence also suggests, however that the effectiveness of the Programme in a particular establishment does not necessarily depend on the active involvement of a large proportion of the staff. In all of the schools visited, there was at least one person on the staff who had a personal interest in environmental education. In most cases, there were two or three people (teachers and/or the headteacher) who were the main initial force in developing the initiative. The same holds for the schools surveyed across the eight local authorities (see Appendix 3, Figure 1). However, the evidence from the case studies suggests that the key to success lies in making the achievement of the objectives of the Eco Schools Programme an integral part of the operations of the school – a task that ultimately falls to the senior management team.

Willow PS – one of the case studies – is an excellent example of this approach. The priorities that comprise the Eco Schools Programme were considered to be central to the school's purpose, and were addressed through the 5–14 curriculum and through the integrated committee structure, where pupils from the Pupil Council and the Eco Committee collaborate on a range of inter-related issues through the medium of sub-committees. This is in marked contrast to the situation in a rural primary school that had yet to achieve an award, which,

when asked in the survey to identify the 'least satisfactory aspect of your school's involvement in the Eco Schools Programme', had commented that

Here is yet another initiative that has to be undertaken by schools. We want to teach reading and writing etc as well!

Another primary teacher commented that the least satisfactory aspect was that

... people see this as an add-on to the curriculum instead of something that can be incorporated.

It was emphasised repeatedly during the interview with the DHT at Willow PS (and in the interview with the HT) that, although the visible commitment of the SMT is a prerequisite for success, long-term sustainability was only achievable if the Programme's aims (and the associated activities) are embedded in the life of the school. However, the Programme was a mature initiative in this school, as it and its antecedents had been running for nearly a decade. In contrast, the HT of Beech PS described the situation one and a half years after registration:

When you first start in the Eco Award, you're given a folder that has all the different areas that should be looked at, and what would be required [for the awards]. You tend to use that as a bible and just go through it, ticking off things that can or have been achieved. You're not aware of how much broader [the Programme] can or should be.

HT, Beech PS

# 2.2.2 Priority in school development planning

It is thus encouraging that 61 per cent of those who responded accorded the Eco Schools Programme 'very high priority' or 'high priority' in their school development plan. However, analysis of the small number of responses (29) from secondary schools revealed that in a substantial minority of cases (12), the Programme was accorded 'not very high' or 'low' priority. The net effect of this, compounded by the apparent lack of interest on the part of some pupils (see below) may partly explain the relatively low levels of registration in the secondary sector.

#### 2.2.3 Secondary school pupils' perceptions of involvement

The responses to the pupils' questionnaire (see Table 1 overleaf) illustrate the level of involvement amongst pupils in the small number of secondary schools (30) that responded to this part of the survey.

The findings raise the question of what is the optimum level of participation in a programme such as Eco Schools, particularly in the secondary sector. Is it possible to improve significantly upon a situation in which the majority (23 out of 30) report that 'most people know what's going on, but only some are really prepared to get involved'; and 22 out of 30 report that 'there are a number of Eco activities that pupils are involved in'? Those who attend an orchestral concert can be described as participating, albeit in quite a different way to the musicians on the platform. By the same token, putting a plastic bottle or an aluminium can in a recycling facility in school may also be described as a valid form of participation. Nevertheless, there are indications that lack of interest

Table 1: Secondary pupils' perceptions of the impact of participation in Eco Schools

	Strongly agree	Agree	Disagree	Strongly disagree
All the pupils know what's going on with Eco Schools – there's a real buzz.	3	8	18	0
There are a number of Eco activities that pupils are involved in.	8	14	6	0
We make sure that all the pupils know what's going on, but some aren't really interested.	9	18	1	1
Most people know what's going on, but only some are really prepared to get involved.	5	18	5	0
It is really just the Eco Committee that is active.	3	9	11	4

among secondary-age pupils is an inhibiting factor. Members of the Eco Committees in two of the case-study schools explained the situation as follows:

We do inform the pupils, and are still working to inform them, but the majority of the school seems to be uninterested in anything relating to the Eco club, so all activities are performed by the same group of students.

Eco Committee, Sycamore High School, South Lanarkshire

There are a lot of people here who are not really interested, even although the evidence is there for what we are doing [new litter bins and recycling facilities]. Half the people in my year don't talk to me, they think I'm a freak.

S1 Eco Committee member, Oak HS, Dundee

These views were echoed by the headteacher of another urban secondary school:

We had Tannoy announcements and year group assemblies encouraging pupils to apply for a place on the Eco Committee. Pupils had to answer two simple questions and make suggestions for school improvement. Out of over 950 forms, we only received 32 submissions, and 16 were of very poor quality.

HT, secondary school, Glasgow

This is in marked contrast to the situation in one of the case studies (Willow PS), where the DHT reported being 'inundated' by requests from pupils to serve on one of the three inter-linked committees operating in the school.

However, it is important to bear in mind that progress *can* be achieved in the secondary sector. For example, the response from an Eco Committee in a rural school indicated that although 'some people aren't really interested' and 'only some people are really prepared to get involved', the school had won an environmental award for a successful campaign undertaken by the Pupil Council and the Eco Committee to reduce litter in the vicinity of the school.

The respondents to the pupils' questionnaire provided a number of examples of how other pupils in their schools had become involved in Eco Schools. Many of the activities mentioned, such as recycling, participating in litter reduction campaigns and working in the school garden, correspond to the priority areas outlined in 3.3 below.

## 2.3 Why Eco Schools?

#### 2.3.1 Links with other initiatives

It is clear that the vast majority of schools that took part in the survey were involved in a variety of single-issue initiatives<sup>9</sup> that broadly correspond to the environmental areas addressed through the Eco Schools Programme (see Appendix 1). For example, 94 per cent of the schools surveyed stated that they were involved in Health Promoting Schools; and 80 per cent in Active Schools (see Appendix 3, Table 1 for an overview of the extent of involvement). Health Promoting Schools was the initiative perceived to be most closely linked with the core agenda of the Eco Schools Programme, particularly in respect of the evidence adduced for awards in both initiatives. As one respondent explained:

The work we instigated through our second green flag is being used as evidence for the bronze award for Health Promoting Schools.

Head of Centre, nursery, North Lanarkshire

The existence of a number of parallel initiatives was generally perceived as a positive feature of the cross-curricular landscape in Scottish schools – particularly in the primary sector. (One key stakeholder referred to the 'silo mentality' of some secondary teachers as a significant inhibiter of progress in this sector.)

Of those who responded to the opportunity provided in the questionnaire to comment on the links between the programmes detailed above, 183 (from a total of 186) provided examples of links, such as the re-development of a garden area that provided opportunities for outdoor activity, and an awareness of how food is produced; or the introduction of a 'healthy tuck shop' or a 'walk to school week'. As one respondent explained:

Given time constraints, it makes sense to hit more than one target with initiatives, eg Walk to School week Eco, HPS, Active schools.

HT, primary school, North Lanarkshire

The consensus to emerge was that Eco Schools was, in the words of one respondent, 'a very effective way of working with all of these initiatives'. And although involvement in a number of discrete projects such as Health Promoting Schools, Active Schools etc, could lead to some duplication of effort, the evidence from the questionnaire survey – and indeed from the case studies – suggests that this was outweighed by a number of benefits. The first of these relates to using what appears *prima facie* to be a plethora of initiatives as a platform for democratisation. Concurrent initiatives may provide more children with the opportunity to serve on a committee, and may lead to the involvement of a greater number of staff – both of which contribute to the development of critical mass. This was the view taken in two of the case studies, Willow PS and Rowan PS. In the latter case, there was an active Health Promotion Group, a Pupil Council, the Eco Committee and a Fair Trade Group. These were seen as a way of empowering a greater number of children in a large school. In Willow PS, the Eco Schools Programme was considered an 'umbrella' programme, ie an

-

<sup>&</sup>lt;sup>9</sup> Namely, Health Promoting Schools, Active Schools, Hungry for Success, Determined to Succeed, and Safer Routes to School.

effective mechanism for 'snowballing and layering of environmental education activity' (Bolstad *et al*, 2004) by initiating school-wide practices like recycling and composting, developing unit plans, over-arching themes (such as water or energy) or curriculum resources, or committing to an integrated committee structure for related initiatives, such as health promotion, enterprise and transport.

#### 2.3.2 Reasons for registering

Respondents to the survey were asked to identify, from a series of statements, the most important factor in their decision to register (see Appendix 3, Table 2 and Figure 1). The reasons given, in descending order of priority, were as follows:

- The Programme seemed a good way to develop education for citizenship in the school.
- I/we believed that the school would benefit from a more effective approach to resource use/management (eg waste, energy, water).
- I/we have a personal interest in addressing sustainable development and environmental issues through the curriculum.

These findings reinforce the importance of 'champions' referred to above. They also illustrate the importance of 'walking the talk', in so far as it appears from the above ranking that there is a clear link between devising more effective approaches to resource management and developing education for citizenship.

The findings reported in the next chapter relate to respondents' perceptions of the specific purposes of the Programme as they are set out on the Eco Schools website and in the Handbook.

## 2.4 Questions for discussion and development

- What are the resource implications of the rapid expansion of the Eco Schools Programme?
- What can be done to ensure that schools make consistent progress postregistration?
- What mechanisms could be put in place to capitalise on the expertise of opinion leaders within schools?

# 3: Purposes and impact

I think the main purpose of the Eco Schools Programme is to make children aware of their responsibilities in respect of the environment, with a focus on preserving resources for future generations. It is an opportunity to influence the attitudes and behaviour of coming generations.

DHT, Willow PS

# 3.1 The purposes of the Eco Schools Programme

The Eco Schools Programme is described as 'an environmental management tool, learning resource and recognised award scheme'. Respondents to the questionnaire surveys were asked how important they considered each of these three elements, and to provide an overall ranking. The findings are broadly consistent with those described above, in so far as they signal the perceived importance of the Programme as a learning resource, and as a way of improving resource management (see Appendix 3, Table 3). The status of the Programme as a recognised award scheme was considered the least important dimension, as this element was most frequently ranked third (see Appendix 3, Figure 2). However, it was generally recognised that the award scheme was a motivating factor for some children.

The findings from the pupils' survey confirm this rank order. Pupils rated 'awareness raising' as the most important aspect of the Eco Schools Programme; and saving resources as the second most important. The fact that there were awards associated with the Programme was considered to be the least important dimension by a large margin. The implications of this are explored in greater detail in Chapter 6.

# 3.2 Perceptions of impact

#### 3.2.1 Eco School co-ordinators' and senior managers' perspectives

The survey respondents were invited to consider the above aspects in greater detail by indicating the extent to which they agreed or disagreed with a series of statements relating to the three elements. It is clear that although the fact that the Programme was a recognised award scheme was not considered to be particularly important (by pupils as well as staff), there was strong agreement with the statement 'gaining an award has enhanced/will enhance the status of the school in the local community'. This bears out one of the issues to emerge from the networking seminar held at Bridge of Allan for Eco Schools Co-ordinators in September 2005, where a contributor from Perth & Kinross noted that prominently-displayed Green Flags were clear signs of success, and motivated other schools to become involved. However, there was consensus amongst the key stakeholders interviewed at the beginning of the evaluation that it would be advisable to review the notion of permanent Green Flag status. One respondent commented that 'schools don't stand still', and another that 'schools change all the time, and after seven years you have a completely different group of

-

<sup>10 &</sup>lt;a href="http://www.ecoschoolsscotland.org/">http://www.ecoschoolsscotland.org/</a> Accessed 30 May 2006.

pupils'. And a third thought that permanent Green Flag status 'could lead to complacency'.

The evidence from the questionnaire survey underlines the role of the Programme in helping schools to 'reassess existing practices in respect of resource use and management'. (See Appendix 3, Table 4 for an overview of the responses to Q 18.)

The findings are encouraging when it comes to respondents' perceptions of the aspect of the Programme that they considered most important (see Appendix 3, Figure 3).

- There was a strong consensus that 'involvement in the Programme has had a positive impact on pupils' behaviour in respect of the environment'. The highest number of respondents (96) rated this as most important.
- The Programme was also perceived to have had a positive impact on pupils' motivation. A total of 186 respondents rated this item as either the first or the second most important element of Eco Schools.

The responses to this question also illustrate the extent to which the core environmental topics linked to areas of the primary curriculum. The following quotations provide some examples:

The Programme gives a more practical aspect to environmental lessons.

DHT, primary school, Dumfries and Galloway

Eco ideas are embedded in topic work.

DHT, primary school, South Lanarkshire

Eco Schools is thoroughly integrated within our curriculum planning.

Teacher, primary school, Dumfries and Galloway

The perceived impact of the Programme was explored in respect of the following areas (see Q 22):

- The physical environment of the school
- The ethos of the school
- Reducing energy use
- Promoting healthy lifestyles (specifically in relation to diet and exercise)
- Encouraging participation amongst pupils.

The three areas upon which the Programme was perceived to have had the most impact were, in order of perceived importance:

- The physical environment of the school
- The ethos of the school
- Promoting healthy lifestyles.

(See Appendix 3, Table 5 for a complete overview of the findings in relation to the perceived impact on the five areas outlined above; and Figure 4 for further detail in respect of those perceived to be most important.)

The findings outlined above are consistent with the reported high degree of involvement in the Health Promoting Schools initiative (see under 2.3 above); and the fact that tackling litter and developing the school grounds were clear priorities for many participating schools (see Appendix 3, Table 6). The evidence from a study conducted in New Zealand (Bolstad *et al*, 2004) suggests that 'controlling litter [is] a constant battle', and one that may persist 'despite ... environmental education activities' (p 11).

It is also not surprising, given the findings reported above, that promoting health and well-being were also relatively high up the agenda. Given the current level of public concern about rising levels of obesity amongst the school-aged population, it is possible that the litter reduction agenda is closely linked with the drive to decrease consumption of processed snacks that is one of the foci of the healthy-eating agenda; and to involve children in moderate exercise out of doors. The findings from the survey, and indeed from the case studies, also indicate that tackling litter and improving the school grounds are a common starting points for those new to the Programme.

# 3.2.2 Pupils' perceptions of the impact of the Programme

The findings from the pupils' survey indicate a perception that involvement in the Programme has impacted on behaviour to some extent. The secondary pupils who responded to the survey considered that their peers were now more likely to recycle paper, glass etc, and less likely to drop litter. However, the Programme was perceived to have had relatively little effect in raising awareness of issues such as climate change (see Appendix 3, Table 7).

# 3.3 Perspectives on priorities

Analysis of the open questions relating to the issues raised by pupils at recent Eco Committee meetings, and the issues considered by staff to be 'most relevant' to their school (Qs 27 and 28) revealed a number of shared priorities that are consistent with the findings reported above. The core environmental topics that were considered most relevant by both teachers and pupils were the development of school grounds; and health and well-being.

The development of school grounds was considered to be the one from which pupils (particularly younger pupils who were more likely to engage in active play) were perceived to derive the greatest benefit. This is consistent with the findings from studies of environmental and sustainable development elsewhere in the world. For example, Bolstad *et al* (2004) noted that 'most [of the eight case-study] schools engaged in some form of gardening and associated activities (worm farming, composting, organic methods), particularly with primary and intermediate-aged students' (p 11).

The evidence from two of the case studies (Willow PS and Ash PS) also suggests that there were other more intangible benefits related to personal and social development that derived from working in the garden. The class teacher in

11

Chinn and Rona, 2001; Ebbeling et al, 2002; Reilly and Dorosty, 1999.

Ash PS reported that this was an environment that put some of the more vulnerable children in school at their ease, and enabled her to provide some targeted pastoral care. In addition, all children were perceived to benefit from spending more time outside. Moreover, the school grounds or garden was an area in which progress was clearly visible, not only to all those in school, where it increased motivation, but also to members of the wider community, where it raised the profile of the school.

There is substantial research evidence to suggest a number of benefits to students' learning and motivation from involving them directly in amelioration projects related to the physical environment of the school – both indoors and outdoors (Ruddock & Flutter, 2004; Flutter, 2006; see also The Sorrell Foundation, 2004). Seymour et al (2001) identified a number of wide-ranging benefits of a participatory approach, including improved systems for decisionmaking in schools; the development of advocacy skills in pupils; improved communication with outside professionals; and the increased pace of development of specific improvement projects. The authors also refer to a number of positive cultural changes within schools, and a boost to fund-raising activities that can subsequently be directed at other initiatives. All of these gains are likely to contribute to the fulfilment of the aspirations set out in A Curriculum for Excellence (see under 4.2 below). Active participation in school development projects is also likely to obviate what Jean Ruddock (1983) has described as the 'cultural collision' that occurs when pupils are 'conscripts in the innovative campaigns launched by others'. However, the impact on relatively un-engaged pupils of campaigns launched by their peers is an area that is relatively under-researched.

The focus on health and well-being – particularly in relation to diet – is perhaps a reflection of the fact that this is a national priority area. It also underlines the close links with the Health Promoting School agenda, and is perhaps also a reflection of the recent media coverage about the quality of school meals.

Table 2: Pupils	and teachers'	rating of	frolative	importance o	fcore	onvironmental	tonics
Table 2. Fupils	ana teachers	raing of	reiaiive	importance o	i core o	environmeniai	iopics

Pupils' rating (all)	Environmental topic	Teachers' rating
4	Litter	1
3	Waste minimisation	4
8	Water	7
7	Energy	5
1	School grounds	2
2	Health and wellbeing	3
9	Biodiversity	8
6	Transport	6
5	Other	N/A

It is perhaps not surprising that the respondents to the questionnaire survey placed slightly greater emphasis on systemic elements, such as waste minimisation and various aspects of energy conservation. These are areas that fall within a management remit and have less immediate bearing on the day-to-day lives of pupils in school.

#### 3.3.1 The bigger picture

The open responses to the question relating to issues raised by pupils at recent Eco Committee meetings suggest that pupils were raising a wider range of issues than those covered specifically by the eight core environmental topics of the Eco Schools Programme. Issues raised at recent meetings included climate change, fair trade and health inequalities on a global scale. This relates back to an issue raised by one key stakeholder during the preliminary interviews. Concern was expressed that the focus on schools' progression through the various stages of award that is evident from the Eco Schools website might be at the expense of a progressive deepening of understanding at pupil level. The view taken was that a gear change was necessary during the transition from primary to secondary school, and that there should be a gradual shift away from environmental education at the primary level (with a focus on anti-litter campaigns and waste reduction at the local level) towards a more holistic conception of sustainable development education. This would embrace the initiatives taken at primary level, but would also provide another vehicle through which to address broader issues, such as social justice and health inequalities.

Secondary school pupils who were members of the Eco Committee were also asked what they considered the most important issues. The responding members of the Eco Committee were asked to indicate the extent to which they agreed or disagreed with a series of statements relating to priority areas. The results are summarised in Table 3 below.

It is interesting that in addition to the familiar consensus about the importance of maintaining the school grounds (including strategies for litter reduction) and health promotion, there was universal agreement about the importance of 'learning about things like climate change', and a strong endorsement of the value of 'organising our own activities more.' The implications of these findings are be explored further in Chapter 4.

Table 3: Secondary school pupils' views on issues relating to core environmental topics

	Strongly agree	Agree	Disagree	Strongly disagree
We think our route to and from school should be safer.	7	13	7	1
We need to do something more about bullying in school	11	11	6	1
We need to encourage pupils to eat healthier food.	13	13	2	0
We would like to be able to organise our own activities more.	12	13	4	0
We would like more information about what's going on locally to improve the environment.	12	17	1	0
We think it's important to encourage pupils to take more exercise.	12	17	1	0
We would like to see a wider range of healthy options in vending machines and in the canteen	10	12	6	0
We'd like more pupils (and their families) to get into recycling.	20	10	0	0
We think it's important to keep the school grounds in good condition.	19	10	1	0
We think it's important to learn about things like climate change.	13	17	0	0
We think it's important to keep the school litter free.	24	6	0	0

# 3.4 Questions for discussion and development

- What are the implications of the fact that the award scheme was ranked the third most important element of the Programme?
- What are the most important indicators of changes in pupils' behaviour towards the environment?
- What is the nature of the relationship between the achievement of a specific goal and pupils' and teachers' motivation?
- What is the optimum number of core environmental topics for schools to address?

# 4: Education for citizenship

The best thing about being involved in Eco Schools was being part of a committee. You really feel more involved, and you're being listened to.

Eco Committee, secondary school, North Lanarkshire

# 4.1 Developing responsible participation

It is evident from the surveys and the case studies that the Eco Schools Programme is an effective mechanism for enabling children and young people 'to develop [the] capability for thoughtful and responsible participation in political, economic, social and cultural life' (Learning and Teaching Scotland, 2002, p 3). The majority of schools in the sampling frame (see Appendix 2, Table 1) were primary schools. It is thus not surprising that the main focus of attention – for pupils and teachers alike – was on various types of recycling schemes and other high-profile initiatives, such as the development of the school grounds.

However, the fact that a high percentage of the secondary pupils who responded to the survey indicated a belief that 'it's important to learn about things like climate change in school subjects' (see Table 3 above) indicates that the Programme may need to develop a greater critical edge in order to broaden its appeal to the secondary sector. This was a view expressed by two of the key stakeholders interviewed at the beginning of the evaluation, and is entirely consonant with one of the statements in *A Curriculum for Excellence* (SEED, 2004a), namely that all young people should be enabled to 'evaluate environmental, scientific and technological issues', and 'make informed choices and decisions' (p 12).

Although issues such as climate change and wealth and health inequalities are already covered in the secondary school curriculum, the fact remains that learning about these issues is rated just as highly by the secondary pupil respondents as keeping the school litter-free and maintaining or developing the physical environment of the school. This is an indication that they see the potential of the Programme to make a substantial contribution in this area. (The findings outlined in Appendix 3, Figure 3 suggest that there is further scope for development in this area.) The evidence from the pupils' survey also suggests that there is considerable scope for strengthening and deepening the Programme at secondary level by fostering greater levels of political engagement with such issues amongst the secondary school population (see Appendix 3, Table 7).

#### 4.1.1 Developing critical thinking

The findings from the main questionnaire survey indicate a strong consensus in support of the importance of fostering critical thinking in respect of sustainable development and environmental issues. Seventy-one (71) per cent of those who responded to this question (n=209) considered this dimension to be 'very important'; and 28 per cent thought it 'important'. The development of critical thinking appears to have a higher priority in the secondary sector. In the case of the 29 secondary schools that responded, 86 per cent (n=25) considered this

Head of nursery school, North Lanarkshire

The Programme really does offer opportunities for all children, regardless of academic ability.

Teacher, PS, Dumfries and Galloway

Participation in the Programme is allowing pupils of all abilities the opportunity to develop confidence, self-esteem, interpersonal skills, leadership skills and teamwork. They all enjoy participating, and continue to amaze the staff with their energy and enthusiasm. The Eco Group is one ... activity that appears to attract a lot of boys.

HT, secondary school, Dumfries and Galloway

As regards the overall impact of schools' involvement in the Programme, the majority of comments made by respondents to the questionnaire survey related to increased levels of participation in a number of associated initiatives. This is a further indication that Eco Schools is encouraging children and young people to become actively involved in bringing about social and environmental change in their own localities – and enjoying themselves in the process. There were a number of references to children's enthusiastic participation in specific initiatives – particularly improvements to the school grounds:

Even at this early stage, children are motivated and keen to improve on our areas of school grounds and transport.

Teacher, PS, Glasgow

Our pupils love having the improved playground (with gardens, seating, etc). The green team gives every pupil a chance to be involved.

HT, PS, Glasgow

Members of the SMT in four of the case-study schools summed up the contribution initiatives such as Eco Schools could make to the development of successful learners, confident individuals, responsible citizens and effective contributors:

If a child's achievement has been as a successful member of the Eco Group or the Pupil Council, that's the thing they will remember. It's also the skills and attitudes that will stand them in good stead in adult life... I don't necessarily believe that school is all about attainment. And how do we quantify achievement? You see it in good citizens, don't you, and what they make of their lives later on.

HT, Rowan PS

We are very aware that the Eco Schools Programme is developing responsible citizens, children who are confident enough to talk about what they feel strongly about, who are able to think critically about issues and who will maintain informed attitudes to take forward into the future.

DHT, Willow Primary School

Pride in the school and involvement in the initiative has allowed the school collectively to work towards producing pupils who will be better citizens for the future. This can be achieved in a natural fashion, and can incorporate a range of pupils with different skills.

HT, Sycamore HS

The Programme fits very well with A Curriculum for Excellence. It has made pupils more aware that they can contribute even little things. All pupils are involved, but as in any group in society, some contribute more than others. The P7 pupils are quite responsible, they take it very seriously. But we have a fun side too, and that brings the others on board.

Head of nursery school, North Lanarkshire

The Programme really does offer opportunities for all children, regardless of academic ability.

Teacher, PS, Dumfries and Galloway

Participation in the Programme is allowing pupils of all abilities the opportunity to develop confidence, self-esteem, interpersonal skills, leadership skills and teamwork. They all enjoy participating, and continue to amaze the staff with their energy and enthusiasm. The Eco Group is one ... activity that appears to attract a lot of boys.

HT, secondary school, Dumfries and Galloway

As regards the overall impact of schools' involvement in the Programme, the majority of comments made by respondents to the questionnaire survey related to increased levels of participation in a number of associated initiatives. This is a further indication that Eco Schools is encouraging children and young people to become actively involved in bringing about social and environmental change in their own localities – and enjoying themselves in the process. There were a number of references to children's enthusiastic participation in specific initiatives – particularly improvements to the school grounds:

Even at this early stage, children are motivated and keen to improve on our areas of school grounds and transport.

Teacher, PS, Glasgow

Our pupils love having the improved playground (with gardens, seating, etc). The green team gives every pupil a chance to be involved.

HT, PS, Glasgow

Members of the SMT in four of the case-study schools summed up the contribution initiatives such as Eco Schools could make to the development of successful learners, confident individuals, responsible citizens and effective contributors:

If a child's achievement has been as a successful member of the Eco Group or the Pupil Council, that's the thing they will remember. It's also the skills and attitudes that will stand them in good stead in adult life... I don't necessarily believe that school is all about attainment. And how do we quantify achievement? You see it in good citizens, don't you, and what they make of their lives later on.

HT, Rowan PS

We are very aware that the Eco Schools Programme is developing responsible citizens, children who are confident enough to talk about what they feel strongly about, who are able to think critically about issues and who will maintain informed attitudes to take forward into the future.

DHT, Willow Primary School

Pride in the school and involvement in the initiative has allowed the school collectively to work towards producing pupils who will be better citizens for the future. This can be achieved in a natural fashion, and can incorporate a range of pupils with different skills.

HT, Sycamore HS

The Programme fits very well with A Curriculum for Excellence. It has made pupils more aware that they can contribute even little things. All pupils are involved, but as in any group in society, some contribute more than others. The P7 pupils are quite responsible, they take it very seriously. But we have a fun side too, and that brings the others on board.

DHT, Birch PS

It is clear that one of the factors that distinguished schools such as Willow PS. where the Eco Schools Programme was a long-established and integral part of the school's operations, from those at an earlier stage of development (such as Ash PS) was a clear and consistent commitment to student leadership and responsibility.

# 4.3 Pupils' views

#### 4.3.1 Secondary pupils' views

Members of the Eco Committee in the 83 secondary schools in the sample were asked what had been the best thing about being involved in the Programme. The 29 responses to this item reveal a range of benefits, the most important of which was the sense of satisfaction derived from 'being part of something and being able to help'. These findings underline the importance of fostering student leadership and responsibility, and are consistent with the perceptions of staff in respect of the impact of the Programme on the physical environment and the ethos of the school (see Appendix 3, Figure 4).

Specific initiatives mentioned by members of Eco Committees in secondary schools included starting a recycling scheme, releasing newly-hatched trout into a local burn, influencing food choices at lunchtime, reducing the amount of litter around the school and creating a garden area.

The Eco Committee in Sycamore HS were determined to prevail, despite the fact that many of their peers thought that 'anything ecological is a waste of time':

It will, eventually, make a difference to the way the school, and hopefully the community, regard the environment and important environmental issues.

Eco Committee, Sycamore HS

#### 4.3.2 Primary pupils' views

As stated above, it was initiatives involving the transformation of the physical environment that captured the attention of the primary pupils in the case-study schools. However, there do appear to be differences between schools such as Ash PS that were relatively new to the Programme and those (such as Willow PS) that had been involved for a longer period. In the former, the focus amongst pupils as well as staff was almost exclusively on recycling and the development of the school grounds. In Willow PS, on the other hand, pupils expressed a clear sense of civic duty, and a responsibility for making a positive contribution to the local community, and of leaving a legacy for future pupils in their school. They saw physical and mental well-being as an integral part of the Programme, and as central to the purposes of education. The vast majority of pupils were engaged at some level, from those who took a lead role in the inter-linked committee structure, to those who took responsibility for monitoring various aspects of the school's operation – energy use and paper recycling; fruit consumption and levels of physical activity; litter in the playground; pastoral

care and mediation; use of particular zones in the playground, etc. One little boy proudly announced that he had personally looked after a newly-planted tree in the playground. It was striking that in contrast to some other case studies, nearly every child contributed during the discussion with researchers. These children were clearly walking the talk, and giving an eloquent demonstration of what it is to be a successful learner, a confident individual, a responsible citizen and an effective contributor.

# 4.4 Systemic facilitators and inhibitors

The evidence suggests that changing children and young people's behaviour in respect of the environment requires:

- Strong leadership and strategic vision
- Good communication within the staff team, and with members of the nonteaching staff, such as school caretakers and secretaries
- Targeted initiatives, with visible and sustainable results
- Student leadership and responsibility.

It is clear that many of the schools making steady progress through the award scheme have achieved a great deal in respect of the above. However, a number of inhibiting factors were identified through the responses to the penultimate open question in the main survey. Respondents were asked to identify the 'least satisfactory' aspect of their school's involvement in the Eco Schools Programme. The following obstacles to progress were identified, in descending order of importance:

- Time constraints and other internal systemic limitations (difficulties in convening the Eco Committee; overcoming apathy amongst staff and students; the competing demands of the curriculum; staff changes; lack of progress with particular initiatives, etc.
- Completing and collating the documentation required for the Bronze, Silver and Green Flag Awards.
- External systemic limitations, such as the non-availability or withdrawal of recycling facilities by the local council and lack of control over energy consumption for heating and lighting.
- Lack of parental support.

The factors identified above are interrelated to some degree. There is clearly a perception that the 'paperwork' is onerous, and that 'the race to get an award and all the time spent on the paper exercise' can detract attention from the overarching aim of the Eco Schools Programme, namely to make sound environmental management practices and education for sustainable development an integral part of the operations of the school. The primary teacher quoted above noted that 'the award seems to have become the goal'.

There was some frustration expressed in one of the case studies (Rowan PS) that the children's own paperwork (described as 'natural evidence') could not be included in the portfolio presented for assessment. Teachers were required to rewrite and reinterpret what the pupils had said and done and produce a new report. This was considered to put undue pressure on staff.

There was a patent sense of frustration in respect of specific external constraints, as the following quotation illustrates:

For twelve weeks we have been getting exasperated attempting to have a large recycling bin for waste paper sited in the school, all to no avail. The pupils will shortly be enlisting the help of a local councillor to address this issue.

PT, secondary school, Glasgow

The secretary in Beech PS described how she had spent four to six weeks trying to source recyclable cups in response to a suggestion from the Eco Committee. Conflicting information was received and several companies would not disclose the suppliers of recyclable goods on the grounds of confidentiality. Neither the council nor other schools in the locality could help. The secretary believes that the information and experience she has gained could be of benefit to other schools.

It is evident that if there is a lack of accessible and well-maintained re-cycling facilities in the locality, then it is less likely that awareness-raising in school and enthusiastic primary children taking the message home will impact significantly upon behaviour at home or in the wider community. There was widespread acknowledgement that developments beyond the control of the school could have a positive – or more frequently a negative – impact on progress achieved in school.

A recurring theme in the questionnaire responses and in the case studies was the dissonance between what was being achieved at school level and practices elsewhere in the authority. One of the key stakeholders interviewed at the beginning of the project looked ruefully out of his office over the litter-strewn car park of the council offices, and pointed at wastepaper baskets overflowing with recyclable materials. He commented that these practices would not occur in an award-bearing Eco School.

## 4.5 Questions for discussion and development

- How can the Programme be strengthened and deepened in order to broaden its appeal to secondary schools?
- How can the development of critical thinking in schools be matched by responsive attitudes at strategic and operational levels outside the school community?
- Can strategic links be forged with those responsible for taking forward A *Curriculum for Excellence* in order to capitalise upon progress in meeting its objectives?

- Can the administrative demands placed upon schools in relation to awards be reduced?
- How can external systemic inhibitors of progress be overcome?

# 5: Operations and activities

#### 5.1 Introduction

Participants in the Eco Schools Programme are required to undertake a number of activities shortly after registration. Some of these elements may present greater challenges than others. In this chapter, the focus is on respondents' perceptions of these operations and activities; and on how useful they had found resources such as the Eco Schools Handbook, the Newsletters and the Eco Schools Video.

# 5.2 Operations and activities

Respondents to the questionnaire survey were asked to rate activities such as forming the Eco Committee and conducting the environmental review by degree of difficulty on a four-point scale, ranging from 'very difficult' to 'very easy'. The results are summarised in Table 4 below.

Table 4: Respondents'	perceptions of the degr	ree of difficulty in undertaki	ng core activities.
Tueste :: Tresperiererus	perceptions of the deg.	ee of anyteenty in union in	of core determines.

Activity	Very difficult	Difficult	Easy	Very easy
Forming the Eco Committee (n=280)	5	50	177	48
Conducting the environmental review (n=269)	4	84	170	9
Drawing up an action plan (n=264)	5	84	164	11
Monitoring and evaluation (n=262)	5	111	141	2
Linking the Programme to the curriculum (n=264)	5	58	177	23
Involving the wider community (n=267)	27	117	111	10
Devising the Eco Code (n=256)	2	54	181	18

The area that presents the greatest challenge to schools is 'involving the wider community'. This is consistent with the findings reported in 4.4 above. The evidence from the case studies also suggests that in the majority of cases, communication with parents is restricted to short articles in school newsletters and requests for support and attendance at special events, such as garden openings, etc. The single most important factor behind the challenges involved in conducting the core activities outlined above was lack of time, and competing demands.

## 5.3 Resources

There is a variety of resources available to registered schools on the Eco Schools website, which also provides links to the Bright New Scotland homepage, and to a range of other organisations concerned with the core environmental topics. For the purposes of this evaluation, it was decided to focus on respondents' perceptions of the usefulness of the Eco Schools Handbook, the Newsletter and the Eco Schools video. Table 5 presents an overview of the findings in respect of this issue. The designated resources were rated on a scale ranging from 'very useful', 'quite useful' to 'not very useful' and 'not at all useful'.

Table 5: Respondents' perceptions of usefulness of Eco Schools resources

	Degree of usefulness				
Resources	Very	Quite	Not very	Not at all	N/A
Appendix 1: start-up checklist (n=272)	174	90	2	0	6
Appendix 2: monitoring and evaluating (n=257)	111	128	10	0	8
Environmental review checklist (n=265)	159	93	8	0	5
Litter (n=264)	128	125	2	0	9
Waste (n=253)	113	123	4	0	13
Water (n= 239)	85	127	8	0	19
Energy (n=239)	100	117	6	0	16
School Grounds (n=260)	132	118	1	0	9
Health and Well-being (n=256)	125	119	1	0	11
Biodiversity (n=237)	76	110	13	0	38
Transport (n=225)	62	112	20	1	30
Newsletter (n=273)	89	154	18	1	11
Video (n=255)	90	123	14	1	27

Appendix 1 of the Eco Schools Handbook (start-up checklist) was considered to be the most useful resource. This is encouraging, as it is the section of the Handbook to which schools that have just registered will turn first. The higher number of responses to this item is a further reflection of this. It is also encouraging that the resources concerning the core topics that were highest on participants' agendas (see Tables 2 and 3 in Chapter 3 above) also received a positive reception.

The relatively low number of responses to some of the items is more difficult to interpret. It may be a reflection of the increasing confidence of participating schools as the Programme has become increasingly integrated into the operations of their school. Alternatively, it may signal a lack of engagement with environmental topics considered to be of relatively low priority (such as water), or those that are relatively new to the Programme (such as biodiversity). It is to be expected that increasing ownership at school level will be accompanied by a decline in the reliance on the support of this type of resource.

# 5.4 Support

Eco Schools Programme has responded to the surge in interest in the Programme since its adoption as a performance measure within the framework for school improvement relating to National Priority 4.2C by forging a closer relationship with Bright New Scotland, a team of environmental specialists and teachers based in the west of Scotland that has supported the Eco Schools Management team by providing advice and visiting schools that are working towards a Green Flag Award. The findings reported above underline the importance of the commitment of the senior management team in schools, and have drawn attention to the challenges of ensuring the support of a range of pupils and staff. Lack of parental support has been identified as an inhibiting factor (see under 4.4 above).

Respondents were asked how they rated the interest and support they had received from a range of sources. The findings are summarised in Table 6 below.

Table 6: Respondents' perceptions of level of support received

	Great deal	Some	Very little	None	N/A
Eco Schools Management Team (n=273)	91	114	22	17	29
Eco Schools co-ordinator/development officer (n=275)	104	91	35	20	25
Other staff in school (n=278)	103	145	19	4	7
Senior management in school (n=257)	147	80	6	2	22
Pupils (n=281)	175	90	6	1	9
Parents (n=279)	48	153	53	13	12
Local businesses (n=266)	19	110	70	39	28

These findings show a strong endorsement of the support provided by the Eco Schools Management Team and the Eco Schools Co-ordinators. They may also prefigure a development that will take place as the Programme expands, namely the devolution of support to local authority level. The high level of support attributed to senior managers is likely to be a reflection of the fact that headteachers comprised 37 per cent of the respondents to the survey. Support from pupils was generally perceived to run at a high level, a finding that is consistent with the high levels of satisfaction reported amongst this group. The findings in relation to parents bear out those outlined in 4.4 above; namely, that there was considerable scope for improvement in respect of the involvement of this group.

#### 5.5 Key questions for discussion and development

- How can the level of engagement of the wider community be increased?
- What is the optimum balance between ownership at school level and external support?

### 6: Conclusions and recommendations

#### **6.1** Conclusions

The evidence from the case studies and the surveys serves to reinforce the nexus between environmental and sustainable development education and the aspirations contained within *A Curriculum for Excellence*. The link is encapsulated in the opening quotation of this Final Report; namely, that 'only people with a sense of responsibility for the world and to the world are truly responsible to and for themselves.'

The consensus was that children and young people derive great benefit from the sense that they are 'making a difference' through their involvement in the Eco Schools Programme. However, the evidence also suggests that these benefits seem more readily available to primary pupils. It appears that secondary pupils not only have to contend with the apathy of some of their peers, but also with a growing awareness of the more intractable nature of some of the environmental problems we all face.

It is also clear that opinion leaders in schools, particularly those with senior management responsibilities, have a key role to play in the ultimate success of the Programme. Their leadership, strategic vision and commitment to maximising channels of communication are vital in ensuring success, not only in respect of specific, time-bound initiatives (such as the re-development of the school grounds), but also for the maintenance of the Programme over the longer term. The impact of contingent variables (such as staff changes, delays in the realisation of a particular project or the lack or withdrawal of an external service) can be lessened significantly if the achievement of the objectives of the Eco Schools Programme is made an integral part of the operations of the school.

How is this to be achieved? One way forward might be to harness the expertise of schools that have attained a Green Flag to the benefit of others that have only recently become involved. This would not merely be with a view to providing blueprints for action. Examples of good practice can be of limited hermeneutic value. Rather, the aim would be 'to develop capability for thoughtful and responsible participation'.

It would be counterproductive if the rapid expansion of the Programme were at the expense of schools 'using [the Handbook and associated check-lists] as a bible, just going through it, ticking off things that can or have been achieved', as one participant described the process in the early days. Those responsible for the Programme in school – both teachers *and* pupils – need to have a degree of autonomy and confidence if they are to find their own way, to withstand the inevitable disappointments, and to succeed in making their voices heard in the wider polity.

In the context of the further development of the Programme, it might be instructive to reconsider the slogan 'reduce, re-use and recycle'. Providing schools with abundant resources (in the form of topic sheets, fact sheets and web-links) can give useful pointers. However, it can also be counter-productive,

in that it may lead to overload, and divert attention from the task of harnessing the resources and activities already present in school. The co-ordinators at Rowan PS strongly believed that they had done far more than was necessary to gain a Bronze Award. This belief may be behind the relatively high number of responses that indicated that they had not yet received an award (see 2.1 above).

#### 6.2 Recommendations

The recommendations that follow have emerged from close scrutiny of all the evidence collected in the course of the evaluation, and are intended for further discussion and debate.

#### 6.2.1 Changing the emphasis from awards to self-directed learning

The evidence suggests that schools set a relatively low priority on gaining an award. And yet this aspect features prominently on the Eco Schools website.

• More space on the Eco Schools website could be devoted to rationale rather than structure, and to process rather than procedures.

#### 6.2.2 Engaging the secondary school community

- The Eco Schools Management Team should endeavour to increase the involvement of secondary schools.
- This might be achieved by displaying more prominently on the main website pages (ie not just in Bulletin PDFs) material associated with activity and achievements in the secondary sector.
- Consideration might be given to setting up twinning arrangements between primary schools and secondary schools, in order to expedite particular initiatives in the primary school; and to provide personal development and mentoring opportunities with a sustainable development focus for a range of secondary pupils. Such arrangements should also be prominently displayed on the main pages of the Eco Schools website.
- The website might be further developed to include a section specifically for secondary schools. This could be developed in consultation with pupils from participating schools.

#### 6.2.3 Defining the criteria for awards more tightly

The criteria for awards are currently defined fairly loosely. This allows for greater flexibility for both schools and assessors. However, it may contribute to some schools delaying applications for awards, or account for disparities between schools that have achieved the same level of award.

• The Eco Schools Management Team should consider defining more closely the award criteria.

#### 6.2.4 Communicating achievements

The evidence suggests that communication with parents and the wider community was largely restricted to short newsletter items, and to inviting parents to specific awareness-raising events ('eco days', garden openings, etc). There are clearly challenges associated with involving parents during the school day, when many are working.

- The Eco Schools Management Team should consider strengthening the requirement for effective communication into the assessment criteria.
- Participating schools should consider involving staff with a home-school link remit more actively in this dimension of the Programme.
- There should be a gradual shift in emphasis from frequency of meetings involving members of the community towards increasing the quality of community involvement.

#### 6.2.5 Sharing ideas

There are two dimensions to this issue. The first is to harness the experience of those schools that have attained Green Flag status. The second is to make practical trouble-shooting advice more readily available, and to extend the sharing of good ideas beyond the pages of the monthly Eco Schools Bulletin.

- Consideration should be given to reviewing the utility of permanent Green Flag status and harnessing the experience of schools that have gained three Green Flags to the benefit of other schools. This could be achieved by involving headteachers in a limited number of assessment visits and in a series of networking conferences, during which they would be able to offer practical support and encouragement to other schools in their area.
- The Eco Schools Management Team should consider flagging up new ideas more clearly on the website pages, not just in Bulletin PDFs.
- The Team should consider establishing easily identifiable databases or a Frequently Asked Questions (FAQ) section for information that would benefit regions and larger numbers of schools, and be proactive in gathering local experience and advice, eg in relation to funding opportunities; external groups/events available for booking in local schools; and frequently encountered issues such as paper cup recycling and waste paper management.

#### 6.2.6 Streamlining assessment procedures

There is evidence to suggest that there is too much paper work required in order to gain an award. Furthermore, it appears that children's reports and writing are not valid elements of the written evidence submitted to assessors. This has implications not only for schools, but also for the Eco Schools Management Team, which faces an increasing workload as registered schools proceed through the levels of award. Delays in assessment may result in schools losing momentum.

• The Eco Schools Management Team should consider allowing the inclusion of pupils' own reports and writing as valid elements of the written evidence submitted to assessors. This would be a very effective way of increasing pupils' participation.

#### 6.2.7 Getting local authorities on board

There appears to be considerable diversity of practice across local authorities in respect of the level of support offered to schools that have launched, or are attempting to launch recycling schemes for paper, plastic and glass.

• There is an urgent need for local authorities to increase levels of support to schools in respect of waste management. This will enable schools to fulfil their role as opinion leaders, and to influence the attitudes and practices of coming generations towards the environment.

### 7: References

- Bolstad, R., Eames, C., Cowie, B., Edwards, R. and Rogers, N. (2004) Environmental Education in New Zealand Schools: research into current practice and future possibilities. Volume 4: Case studies of environmental education practice in eight schools and kura kaupapa Mäori. Ministry of Education, New Zealand. ISBN 0-478-13037-6 ISBN no. (Internet copy): 0-478-13038-4.
- Chinn, S. and Rona, R. J. (2001) Prevalence and trends in overweight and obesity in three cross-sectional studies of British children, 1974–94. *British Medical Journal*, 322(7277): 24–26.
- Ebbeling, C. B., Pawlak, D. B. and Ludwig, D. S. (2002) Childhood obesity: publichealth crisis, common sense cure. *Lancet*, 360(9331): 473–482.
- Eco Schools Scotland (nd) The Eco Schools Handbook.
- Flutter, J. (2006) 'This place could help you learn': student participation in creating better school environments, *Educational Review*, 58, 2, pp 183–193.
- Foundation for Environmental Education (nd) Annual Report 2004.
- Havel, V. (1998) The Art of the Impossible. New York: Fromm.
- Learning and Teaching Scotland (2002) Education for Citizenship. A Paper for Discussion and Development.
- Reilly, J. J. and Dorosty, A. R. (1999) Epidemic of obesity in UK children. *Lancet*, 354(9193): 1874–1875.
- Ruddock, J. (1983) In-service courses for pupils as a basis for implementing curriculum change, *British Journal of In-service Education*, 10, 1, pp 32-42.
- Ruddock, J. and Flutter, J. (2004) *How to improve your school. Giving pupils a voice*. London and New York: Continuum.
- Scottish Executive Education Department (2004a) A Curriculum for Excellence.
- Scottish Executive Education Department (2004b) Ministerial Response to A Curriculum for Excellence.
- Seymour, J., with Cottam, H., Comely, G., Annesley, B. and Lingayah, S. (2001) *School Works tool kit.* London: School Works Ltd.

# **Appendix 1:** Structure of the Eco Schools **Programme**

#### Introduction

Eco Schools is 'a whole-school programme for environmental education, management and certification, and education for sustainable development'. It links with a number of curriculum areas, and many cross-curricular areas such as education for citizenship and sustainable development, Personal and Social Education (PSE), health education, and social studies, including the global dimension. Its aim is to involve teachers, non-teaching staff, pupils and their families and other members of the local community, and 'to create a shared understanding of what it takes to run a school in a way that respects and enhances the environment'. <sup>2</sup>

#### The seven elements

The Eco Schools Programme is process-oriented, and comprises seven elements, which are shown in the diagram below.<sup>3</sup>



<sup>&</sup>lt;sup>1</sup> Source: Foundation for Environmental Education (FEE) Annual Report, 2004, p 4.

Source: Eco Schools Handbook, p 3
 Source: Eco Schools Handbook, p 7

The **Eco Committee** is at the heart of the Eco Schools process. It comprises pupils, teachers (including member(s) of the SMT), non-teaching staff, and other stakeholders in the local community. The **environmental review** enables schools to establish benchmarks and set realistic targets in respect of the seven environmental areas (see below). The **action plan** is a timetabled set of targets, the achievement of which leads to the environmental improvements outlined in the review. **Monitoring action and evaluating progress** are essential if schools are effectively to ascertain whether or not they have achieved their targets. The Programme provides a variety of opportunities to address **cross-curricular themes**. **Involving the whole school and the wider community** is central to the holistic, participatory approach of the Eco Schools Programme.

#### The Award Scheme

The award criteria for **Bronze**, **Silver** and **Green Flag** level are clearly outlined in the Eco Schools Handbook in respect of each of the seven elements.

#### The Eco Schools Environmental Areas

Participating schools are encouraged to address local concerns relating to the following areas:

- Litter
- Waste Minimisation
- Energy
- Water
- Health and Well-being
- School Grounds

The Handbook provides an introduction and background to some of the issues, and provides some suggestions for ways of addressing these issues. Schools are encouraged to concentrate on areas that are most relevant to the school community, and to set realistic targets.

The Handbook also identifies **objectives** and **learning outcomes** in respect of each environmental area, and suggests some **activities** to help schools get started in each area. Each section concludes with some **case studies**, that is, examples of strategies used by individual schools to tackle a particular issue.

## **Appendix 2: Methodology**

#### **Postal survey**

#### Sample size and response rate

Strand 1 of the evaluation comprised a postal survey of all schools registered for the Eco Schools Programme in the following eight local authorities: Dumfries and Galloway, Shetland, Dundee, North Lanarkshire, Glasgow, South Lanarkshire, Western Isles and Highland (see Table 1).

The Eco Schools database indicated that there were 655 schools registered for the Programme across the eight authorities. The sample size was revised downwards to 633 because three schools had closed; one school (in a remote island community) was deemed 'inaccessible' by the postal service; and one was a Saturday school for a minority religious groups. In addition, correspondence was received from twelve schools to the effect that for a variety of reasons (staff changes, illness or absence, loss of records, etc) it was not possible to complete the questionnaire. A further five schools returned partially-completed questionnaires with a note to the effect that they were not in fact registered for the Programme.

Permission was sought from the Director of Education in each authority, and consent obtained in writing or by telephone. Postal questionnaires were subsequently sent to all 655 schools in early February 2006. Reminder letters and further copies of the questionnaire were issued to all non-returners at the beginning of March. A total of 305 completed questionnaires were used for statistical analysis. This represents a response rate of 48 per cent. The response rates for the two main categories nursery/primary schools and secondary schools, 84 per cent and 10 per cent respectively, broadly correspond to the proportion of schools from these sectors in the sampling frame (83% and 13% respectively). See Table 2 for a detailed breakdown of the responses.

#### The respondents

As expected, given the nature of the sampling frame, the majority of respondents fell into the following categories: headteachers (37%); teachers (28%); and DHTs (12%). Not surprisingly, given reported levels of seniority, the majority or respondents (66%) were experienced teachers, and had careers spanning 16 years or more. More than half (57%, n = 173) indicated that they had instigated their schools involvement in the programme

#### Sample selection

The sample was selected to ensure that schools in urban and rural areas were represented in the survey; and that the schools were geographically dispersed. Another key variable in the selection procedure was the percentage of schools registered in each local authority. Statistics provided by the Eco Schools Management Team indicated that levels of registration ranged from 100 per cent in Dumfries and Galloway to 22 per cent in Highland. Tables 1 and 2 provide an

overview of the initial sampling frame (drawn from the Eco Schools Database) and the questionnaire responses received (from the SPSS input).

#### Questionnaire design

Colleagues in the Education for Global Citizenship Unit in the Faculty of Education were consulted about the draft questionnaire, as were the Eco Schools Management Team and the project advisory group.

#### Secondary pupils' consultation

The mailing to secondary schools (n=89) included a short questionnaire (attached) intended for collective completion by student members of the Eco Schools Committee. The response was disappointing, and only 30 completed forms were returned. This limited the extent of the analysis of this component of the research, although the views of secondary pupils are represented in the report.

Table 1: Sampling frame by location and type of registered school

LA	Location	Nursery/ primary (n)	%	Secondary schools (n)	%	Other	%	Total	%	% of LA total
Dumfries and Galloway	rural	112	17	16	2	1	0	129	20	100
Shetland	rural	24	4	2	0	6	1	32	5	91
Dundee	urban	51	7	5	1	1	0	57	9	88
North Lanarkshire	urban	130	20	16	2	4	0	150	23	75
Glasgow	urban	126	19	21	3	2	0	149	23	45
South Lanarkshire	urban	57	9	15	2	2	0	74	11	42
Western Isles	rural	9	1	1	0	1	0	15	2	37
Highland	rural	35	5	13	2	1	0	49	7	22
Totals		544	83	89	14	22	3	655	100	

Table 2: Questionnaire responses by authority and type of registered school

LA	Location	Nursery/ primary (n)	%	Secondary schools (n)	%	Other	%	Total	%
Dumfries and Galloway	rural	63	21	6	2	2	1	71	23
Shetland	rural	13	4	1	0	1	0	15	5
Dundee	urban	17	2	2	0	0	0	19	6
North Lanarkshire	urban	69	8	8	3	2	1	79	26
Glasgow	urban	43	3	3	0	10	3	56	19
South Lanarkshire	urban	28	9	5	2	2	1	35	12
Western Isles	rural	5	2	0	0	0	0	5	2
Highland	rural	17	4	4	1	0	0	21	7
Missing data		2	0			2	0	4	2
Totals		257	84	29	10	19	6	305	100

#### **Case studies**

The selection of the seven schools for further in-depth study was informed by information supplied by the Eco Schools Management Team. In addition to being geographically dispersed, and comprising a combination of primary (5) and secondary schools (2), the selected schools also represented a range and depth of experience of the Eco Schools Programme. Table 3 provides an overview of the sites visited. The identity of individual schools has been disguised in order to maintain confidentiality.

Access was negotiated through the respective local authority representatives. Initial contact was made with the schools via letter (dated 17 January). A leaflet describing the project was also enclosed. This initial contact was followed up by telephone and email, in order to negotiate with the SMT in the school concerned. It was considered particularly important to ensure that the views of a wide variety of respondents were represented. The perspectives of non-teaching staff were considered to be particularly important gauges of school ethos, and to be significant indicators of the extent of collaborative planning and teamwork in the school setting.

Data were gathered by means of semi-structured interviews. This method ensured that there was sufficient flexibility to follow up on specific areas of mutual interest. The broad themes covered in the course of the interviews were: conceptions of environmental awareness and sustainable development; experience and understanding of the Eco Schools Programme; management strategies and staff development issues; and experience and perceptions of the core elements of the Programme and its impact upon all those concerned.

Table 3: Overview of case studies

School	Local authority	Interviewees	Total
Ash PS	Dundee	HT; teacher; pupils (8); parents (3); community representative (1)	14
Willow PS	South Lanarkshire	HT, DHT, classroom assistant; Eco Committee (8); community members (2); pupils (8); parents (4)	25
Oak HS	Dundee	HT, DHT, teachers (5); janitor; local waste disposal plant manager; community policeman; Eco Committee (5).	15
Beech PS	Dundee	Teachers (2); janitor; secretary; parent helpers (2) pupils who are members of the Eco Committee (6); and other pupils (5)	17
Rowan PS	South Lanarkshire	HT; teacher; DHT (health promotion) pupils; parents (3); janitor; community representative; pupils on Eco Committee (c 5); pupils not on Eco Committee (c 4)	17
Birch PS	South Lanarkshire	DHT; teacher; pupils (8) on Eco Committee; pupils (6) from Pupil Council; and parents (2)	14
Sycamore HS	South Lanarkshire	HT; teacher; grandparents (2); pupils (4); janitors (2)	10
			112

## **Appendix 3:** Overview of the main findings from the questionnaire survey

Table 1: Involvement with other programmes

Currently involved with		Type of Institution						
other programmes	Nur/Prim	Sec	Other	Total	%			
Determined to Succeed	196	17	13	226	74			
Hungry for Success	186	13	14	213	70			
Active Schools	217	16	12	245	80			
Health Promoting Schools	245	25	18	288	94			
Safer Routes to School	148	6	3	157	52			

Table 2: Reasons for joining the Eco Schools Programme

	Reasons	Type of Institution (N=305)					
	Reasons	Nur/Prim	Sec	Other	Total	%	
A	I/we believed that the school would benefit from a more effective approach to resource use/management (eg waste, energy and water).	184	24	14	222	73	
В	Senior management decided to use Eco Schools to improve resource use/management (eg waste, energy and water).	61	6	6	73	24	
С	Local authority representatives encouraged us to participate in the Programme.	143	11	10	164	54	
D	We were inspired by the example of other school(s) in the area.	72	9	3	84	28	
E	Parents expressed an interest in participating in the Programme.	13	0	2	15	5	
F	Pupils expressed an interest in participating in the Programme.	53	8	5	66	22	
G	I/we have a personal interest in addressing sustainable development and environmental issues through the curriculum.	160	23	15	198	65	
Н	It is school policy to address sustainable development and environmental issues through the curriculum.	112	10	11	133	44	
I	The Programme seemed a good way to develop education for citizenship in the school.	218	20	13	251	82	
J	The school became involved to meet a performance measure within the School Improvement Framework.	31	5	2	38	13	
K	Other	13	0	2	15	5	

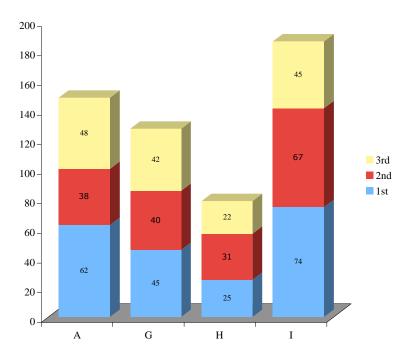


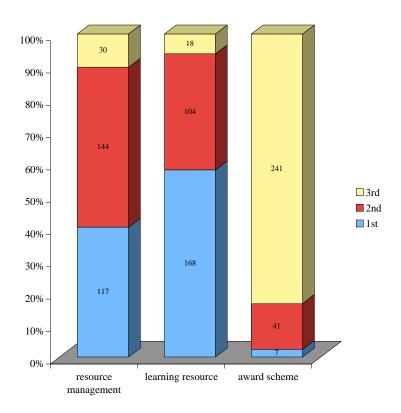
Figure 1: The most important reasons for joining the Eco Schools Programme

- A I/we believed that the school would benefit from a more effective approach to resource use/management (eg waste, energy and water).
- G I/we have a personal interest in addressing sustainable development and environmental issues through the curriculum.
- H It is school policy to address sustainable development and environmental issues through the curriculum.
- I The Programme seemed a good way to develop education for citizenship in the school.

Table 3: Perceptions of the primary purpose of the Eco Schools Programme

	Rated Very Important		Type of Institution				
	Kateu very important	Nur/Prim	Sec	Other	Total		
A	The Programme as a way of improving resource use and management (eg water, energy)	175	18	10	203		
В	The Programme as a learning resource	184	17	13	214		
C	The Programme as a recognised award scheme	90	14	4	108		

Figure 2: Dimensions of the Eco Schools Programme considered most important



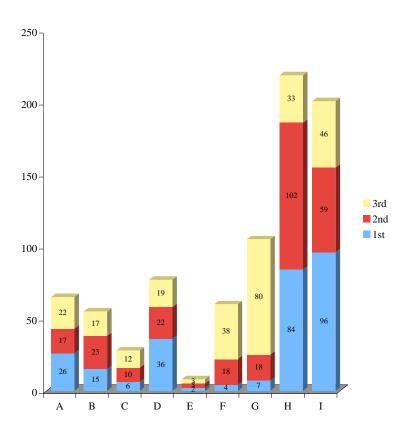


Figure 3: Perceptions of the Eco Schools Programme in terms of impact

- A The Programme has helped us set priorities in respect of resource use and management (eg waste, energy and water).
- B The Programme helped us reassess existing practices in respect of resource use and management (eg waste, energy and water).
- C The Programme made us aware of existing strengths in respect of resource use and management (eg waste, energy and water).
- D The Programme has had a considerable positive impact on the primary school curriculum.
- E The Programme has had a considerable positive impact on the secondary school curriculum.
- F Gaining an award has enhanced/will enhance the status of the school in the local community.
- G Gaining an award was/will be the most important part of the Programme for pupils.
- H Involvement in the Programme has had a positive impact on pupils' motivation.
- I Involvement in the Programme has had a positive impact on pupils' behaviour in respect of the environment.

Table 4: Aspects of the Eco School Programme

	Aspects	Strongly Agree	Agree	Disagree	Strongly Disagree	N/A
A	The Programme has helped us set priorities in respect of resource use and management (eg water, energy). (N=293)	86	170	20	4	13
В	The Programme helped us reassess existing practices in respect of resource use and management (water, energy). (N=292)	99	164	14	3	12
С	The Programme made us aware of existing strengths in respect of resource use and management (eg water, energy). (N=289)	66	184	23	5	11
D	The Programme has had a considerable positive impact on the primary school curriculum. (N=275)	91	133	19	2	30
Е	The Programme has had a considerable positive impact on the secondary school curriculum. (N=113)	5	18	11	2	77
F	Gaining an award has enhanced/will enhance the status of the school in the local community. (N=291)	109	140	25	2	15
G	Gaining an award was/will be the most important part of the Programme for pupils. (N=287)	22	94	146	19	6
Н	Involvement in the Programme has had a positive impact on pupils' motivation. (N=288)	96	173	6	2	11
I	Involvement in the Programme has had a positive impact on pupils' behaviour in respect of the environment. (N=291)	68	189	13	3	18

Table 5: Perceived impact of the Eco Schools Programme

		Level of impact							
	Type	Very			Very				
		positive	Positive	Negative	negative	N/A			
A	The physical environment of the school. (N=279)	132	141	1	0	5			
В	The ethos of the school. (N=254)	67	169	2	1	15			
C	Reducing energy and water use. (N=253)	50	174	16	0	13			
D	Reducing car use during travel to and from school. (N=229)	2	109	53	7	58			
E	Promoting healthy lifestyles. (N=272)	103	156	0	0	13			
F	Encouraging pupil participation across the ability range. (N=275)	102	163	1	0	9			
G	Encouraging pupil participation amongst disaffected and/or low attaining pupils. (N=262)	61	180	5	0	16			

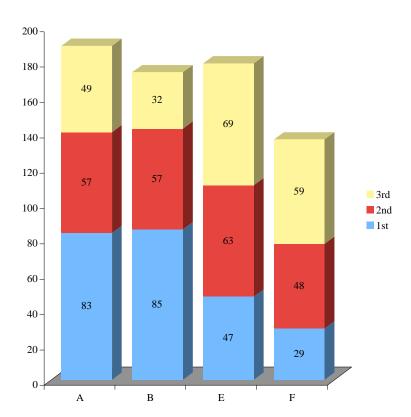


Figure 4: Perceptions of the impact of the Eco Schools Programme on four key domains

- A The physical environment of the school.
- B The ethos of the school.
- $E-Promoting\ healthy\ lifestyles.$
- F Encouraging pupil participation across the ability range.

Table 6: Core Environmental Topics addressed to date

	Core Environmental Topic	T	ype of l	Institution (	N=305)	
	Core Environmental Topic	Nur/Prim	Sec	Other	Total	%
A	Litter	228	23	14	265	87
В	Waste minimisation	180	22	13	215	71
C	Water	91	3	9	103	34
D	Energy	139	9	10	158	52
E	School Grounds	212	19	14	245	80
F	Health and Well-Being	209	18	15	242	79
G	Biodiversity	49	5	8	62	20
Н	Transport	100	6	3	109	36

Table 7: Secondary pupils perceptions: 'the Eco Schools Programme has made pupils ...'

	Action	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't know
A	happier and more confident (N=28)	0	15	4	0	9
В	less likely to drop litter. (N=29)	3	19	4	1	2
C	more likely to recycle paper, glass, etc. (N=29)	8	17	2	0	2
D	more likely to encourage friends and family to recycle paper, glass, etc. (N=29)	7	15	2	1	4
E	more aware of issues like climate change. (N=28)	3	9	12	1	3
F	more interested in what is happening in the local community. (N=28)	1	11	9	1	6
G	more likely to join organisations like the World Wildlife Fund, Greenpeace, etc. (N=28)	3	7	10	1	7
Н	more likely to walk to school, or to use public transport. (N=27)	1	12	6	1	7
I	more likely to eat healthier food. (N=28)	3	17	6	1	1
J 	more likely to encourage friends and family to eat healthier food. $(N=28)$	2	12	5	2	7

Table 8: Involvement in the Programme has enabled respondents to ...

	Action	Strongly Agree	Agree	Disagree	Strongly Disagree	N/A
A	embed sustainable development and environmental issues within the curriculum. (N=290)	105	175	9	1	0
В	develop a systematic approach to education for citizenship for all our pupils. (N=285)	84	180	20	1	0
С	provide enhanced learning opportunities for more able children. (N=289)	69	170	48	1	1
D	provide appropriate learning opportunities for less able children. (N=290)	70	189	29	2	0
E	motivate some children who were previously disengaged from learning. (N=285)	64	185	35	1	0
F	raise pupils' awareness of sustainable development and environmental issues. (N=292)	149	142	1	0	0
G	raise teaching staff's awareness of sustainable development and environmental issues. (N=292)	112	168	12	0	0
Н	raise non-teaching staff's awareness of sustainable development and environmental issues. (N=292)	97	178	16	1	0
I	enhance the profile of the school in the local community. (N=286)	105	161	19	1	0
J	develop a shared vision for the whole school. (N=289)	110	167	12	0	0
K	effect significant changes in pupils' behaviour. (N=269)	49	163	54	1	2